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CONSUMER ATTITUDE
AND BEHAVIOR STUDY

Consumer Nutrition Concerns and Restaurant Choices Volume I

The Research Department
National Restaurant Association

CONSUMER NUTRITION CONCERNS AND RESTAURANT CHOICES Summary, Volume 1

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I. BACKGROUND AND OBJECTIVES

In recent years, Americans have become increasingly concerned about health and nutrition. This concern is evidenced by increased participation in exercise and physical fitness programs, increased consumption of "healthy" food products, and an insatiable demand for information on dieting and weight control.

These trends have significant implications for the restaurant industry . Do consumer attitudes toward health and nutrition effect consumption of food eaten away from home? Do they, for example, affect how often consumers eat out? Do they influence restaurant selection or indicate increased preference for specific menu items? Are there new menu items or alternative methods of food preparation that restaurateurs should offer their patrons? Or, do Americans confine their health and nutrition concerns to food eaten at home?

With these questions in mind, the National Restaurant Association conducted a survey to assess consumer awareness of and attitudes toward health and nutrition issues. Information was gathered to determine how these attitudes influence the choice of foods and restaurants. The primary objective of this study was to use this information to identify attitudinal consumer segments and to describe each group.

This report provides a general understanding of survey results. Those interested in more detail, including the response to each inquiry by demographic characteristics (age, sex, income, region of the country, etc.), as well as further detail for each of the four groups, will want to obtain "Detailed Tables, Volume II." To order see the last page of this report.

II. SUMMARY OF KEY FINDINGS

Most Americans feel that they are at least somewhat informed about issues related to health and nutrition. They make a conscious decision to restrict the use of some foods and food additives and make a conscious decision to eat foods which could be considered "healthy." More than half of the adult population claim to exercise at least every other day and take vitamins and minerals to supplement their diets. Using these measures, it is fair to say that Americans are health and nutrition conscious and that awareness levels are widespread.

Dieting to lose weight is not confined to a small or insignificant proportion of the adult population. Slightly more than one third of all adults in the U.S. are either on a diet or have been on a diet in the past year. In light of this information, restaurants offering light or low calorie menu items should be able to tap a real consumer need. This suggestion is supported by data indicating that consumers who eat light or low calorie food at home are very likely to try these types of menu items at restaurants.

While most Americans are aware of health and nutrition issues, all are not alike. Using both attitudinal and behavioral measures, four distinct consumer segments were identified; 1) traditional consumers (38%), 2) weight conscious consumers (28%), 3) health conscious consumers (19%), and 4) uncommitted consumers (12%). Using this classification criteria, only 4% of the U.S. adult population could not be assigned to a group.

Traditional consumers are not only the largest consumer group, but also account for a disproportionately large share of restaurant eating occasions (43%). These consumers tend to be more concerned about how food tastes than the nutritional content or calorie content of the food they eat. More than half indicated that "meat and potatoes" described them completely and almost two-thirds said they "eat what they want whenever they feel like it." At home, these consumers tend to eat foods high in calories, fat, or cholesterol and use fewer low-calorie products than the rest of the adult population.

The traditional consumer's eating behavior at restaurants is consistent with their behavior at home. They are very likely to order steak or roast beef, fried chicken, or fried fish. For the most part, they do not make a point of looking for or ordering foods that are considered light or low in fat when eating out and disproportionately dine at fast food or take-out restaurants more than other types of restaurants.

The weight conscious consumer is the next largest group. Representing 28% of the U.S. adult population, these individuals are primarily concerned about calories; 81% indicated that "paying attention to the calorie content of the food they eat" described their behavior completely. Over 50% indicated that they are either on a diet to lose weight now or have been on a diet in the past year.

At home, the weight conscious consumer eats low calorie foods and uses diet products, such as reduced calorie salad dressing, diet margarine, and diet soft drinks. If available, these consumers are very likely to try low calorie or specially prepared food items at restaurants including calorie controlled entrees and low fat , low calorie fruit based desserts.

Health conscious consumers are concerned about the nutritional value of the food they eat; 71% indicated that paying attention to the nutritional content of the food they eat described their behavior completely. Unlike the weight conscious consumer, they tend not to eat foods such as reduced calorie salad dressings, diet margarine or diet soft drinks. Rather, the health conscious consumer prefers fresh fruits, whole grain breads, and foods cooked without salt. For the most part, these consumers do not consider themselves overweight, they are not on diets, and do not think that they eat more than they should. They tend to exercise more than the rest of the adult population, (39% exercise 5 or more times a week), and disproportionately feel that good diet and nutrition play a role in the prevention of serious illness.

The uncommitted consumer has some of the characteristics of each of the other groups. At home, the uncommitted consumer prepares vegetables cooked without salt and drinks diet soft drinks, behaviors that are associated with the weight conscious consumer. At restaurants, they are very likely to try poultry without skin, and broiled or baked seafood. They also shy away from steak or roast beef and fried foods,

behaviors associated with both the weight conscious group and the health conscious group.

The attitudes of the uncommitted consumer, however, are more like those of the traditional consumer. The uncommitted consumer does not make a point of eating foods that are considered light. Being in peak physical shape is not as important to this group as it is to the weight conscious or health conscious consumer. Neither is eating a lot of fruits and vegetables, or three balanced meals each day. To the contrary, this consumer segment describes themselves as often skipping meals and preferring to eat many snacks throughout the day.

This report provides a discussion of overall trends and an in-depth review of each consumer segment. Also included is a review of the methodology.

III. METHODOLOGY

The study was conducted in February and March of 1986. The questionnaire was jointly designed by the National Restaurant Association and Westat, Inc. and pre-tested prior to starting the data collection process.

All interviewing was conducted by telephone at Westat's Telephone Research Center in Rockville, MD. Respondents were selected using Random Digit Dialing techniques from across the United States. Once a household was contacted, a household member over the age of 18 was randomly selected. Call backs were made until the interview was completed or refused. In total, 813 interviews were conducted, with the average interview taking 15 minutes to complete.

Westat's staff was responsible for all data analysis. Univariate and multivariate techniques, including factor analysis, discriminant analysis, and canonical discriminant analysis, were used to identify consumer segments. All analyses were conducted on unweighted data. Upon completion, case weights were assigned to each respondent. All figures presented in this report have been weighted to reflect the total U.S. adult population.

An appendix to this report discusses the methodology in greater detail.

IV. OVERVIEW

Ninety-three percent of the adults in the U.S. feel that they are at least somewhat informed about issues related to health and nutrition. Their behavior indicates that they are not only aware, but that they have assimilated that knowledge into their daily lives.

Many Americans say they are making conscious decisions to restrict the use of some foods including salt, food additives and sugar. They are also restricting the consumption of foods high in cholesterol and foods high in fat. As shown below, this behavior is part of the prevailing culture.

TABLE IV.1 Percent Consciously Restricting Use of Selected Foods and Food Additives

Item:	Percent:
Salt	68%
Additives (i.e. artificial flavors and colors)	50%
Sugar	68%
Foods high in cholesterol	65%
Foods high in fat	68%

Consistent with the restriction of certain foods is the conscious decision to include others, such as foods high in fiber (67%), foods high in calcium (68%), and starchy foods such as rice, pasta, and whole grain breads (67%).

In addition to being more aware of what they eat, over half (53%) take vitamins or minerals to supplement their diets. They also exercise. Seventy-seven percent of adults in the U.S. exercise at least once a week. Fifty-five percent exercise at least every other day.

TABLE IV.2 Exercise Frequency*

Frequency:	Percent:
Not at all	15%
Less than once a week	8%
1 - 2 times a week	22%
3 - 4 times a week	26%
5 or more times a week	29%
Total	100%

* It should be noted that the questionnaire did not define exercise for the respondents.

In spite of these efforts, many Americans say they are overweight. Forty percent of adults in the U.S. consider themselves overweight. Nineteen percent are currently on a diet, and an additional 16% have been on a diet to lose weight during the past year.

These trends have implications for the restaurant industry. As shown in Figure IV.1, 50% of adults have been to a restaurant that offers light and healthy items, low calorie meals, or foods specially prepared with restrictive diets needs in mind. Thirty percent have tried a specially prepared menu item, most of whom have ordered them more than once.

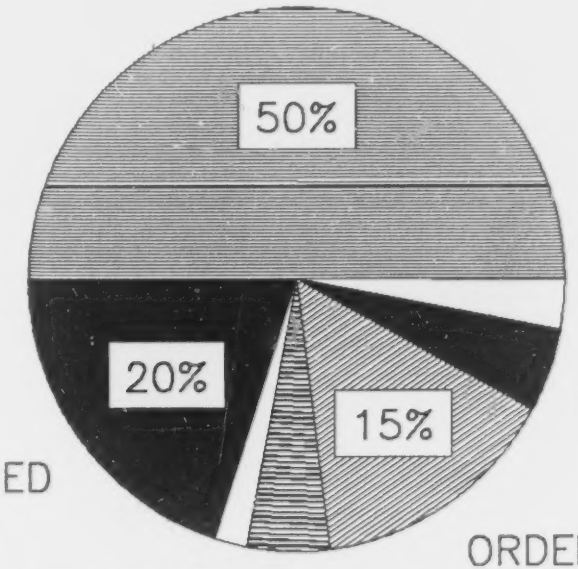
Of the menu items asked about which could be considered "light," "healthy," or "low calorie," fresh fruit, lean meats, and broiled or baked fish or seafood were the most popular. As shown in Figure IV.2, more respondents indicated that they were very likely to try these items than some of the more traditional menu items restaurants offer, such as steak or roast beef, fried chicken, or fried fish. In fact, for each of the main menu groupings, i.e. desserts, beef, chicken, and fish, more respondents indicated that they were very likely to try foods prepared using low calorie or light preparation methods than more traditional food preparation methods.

These data do not suggest that all restaurants ought to offer only certain foods. Rather, they indicate that there is consumer demand for some items and that their inclusion would be welcomed by a significant number of current or potential patrons.

Appendix C includes further overview information.

FIGURE IV.1

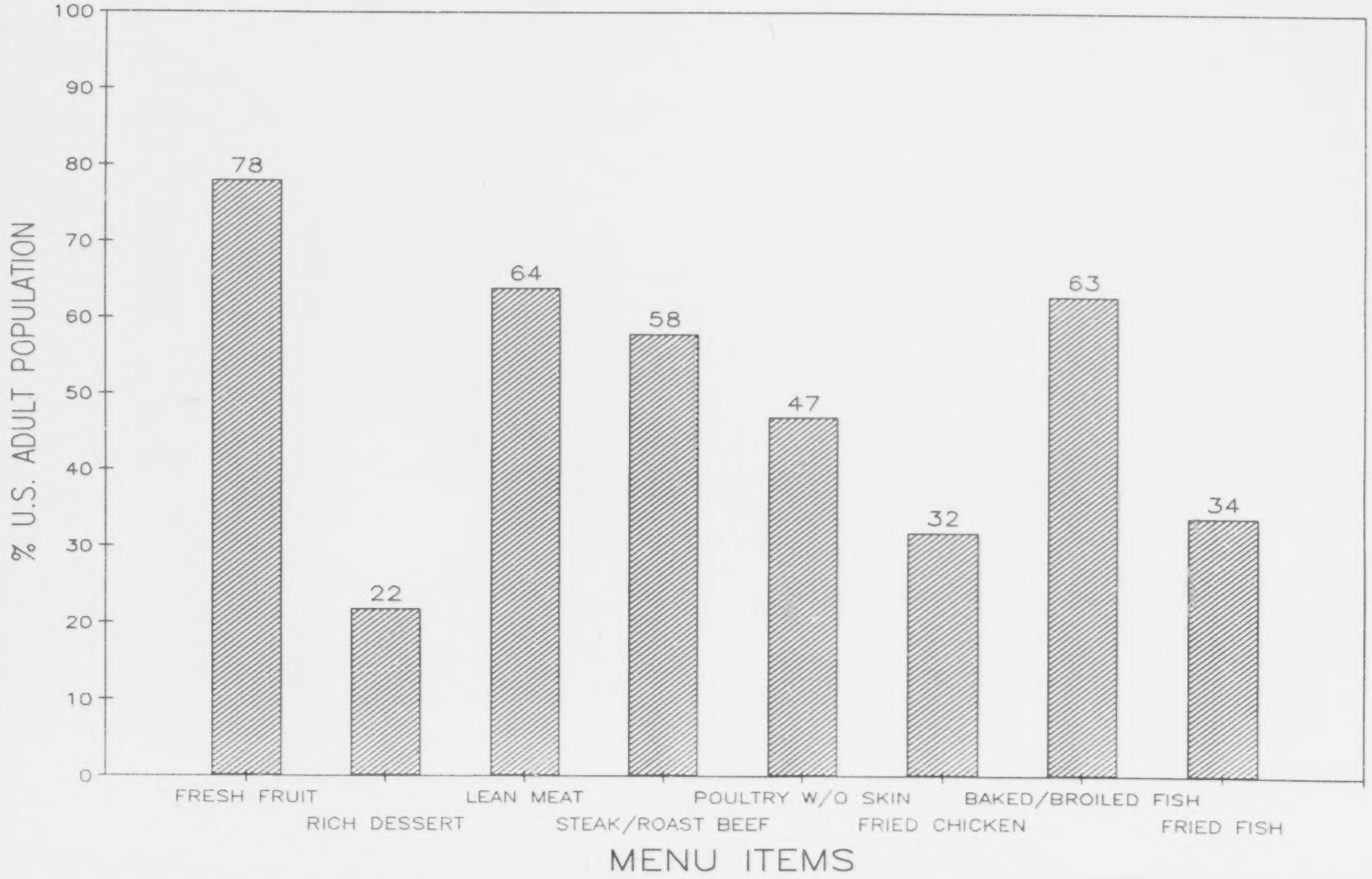
RESTAURANTS OFFERING SPECIAL MENU ITEMS



U.S. ADULT POPULATION

FIGURE IV.2

MENU ITEMS LIKELY TO TRY IF AVAILABLE AT RESTAURANTS



V. SEGMENTATION

Appendix A contains a copy of the questionnaire. Included in this questionnaire is a series of behavioral and attitudinal statements, Questions 15 and 16. Respondents were asked the degree to which they agreed or disagreed with each statement. Also included is a list of self descriptive statements, Question 17. During this questioning sequence, respondents were asked how well each one described their behavior.

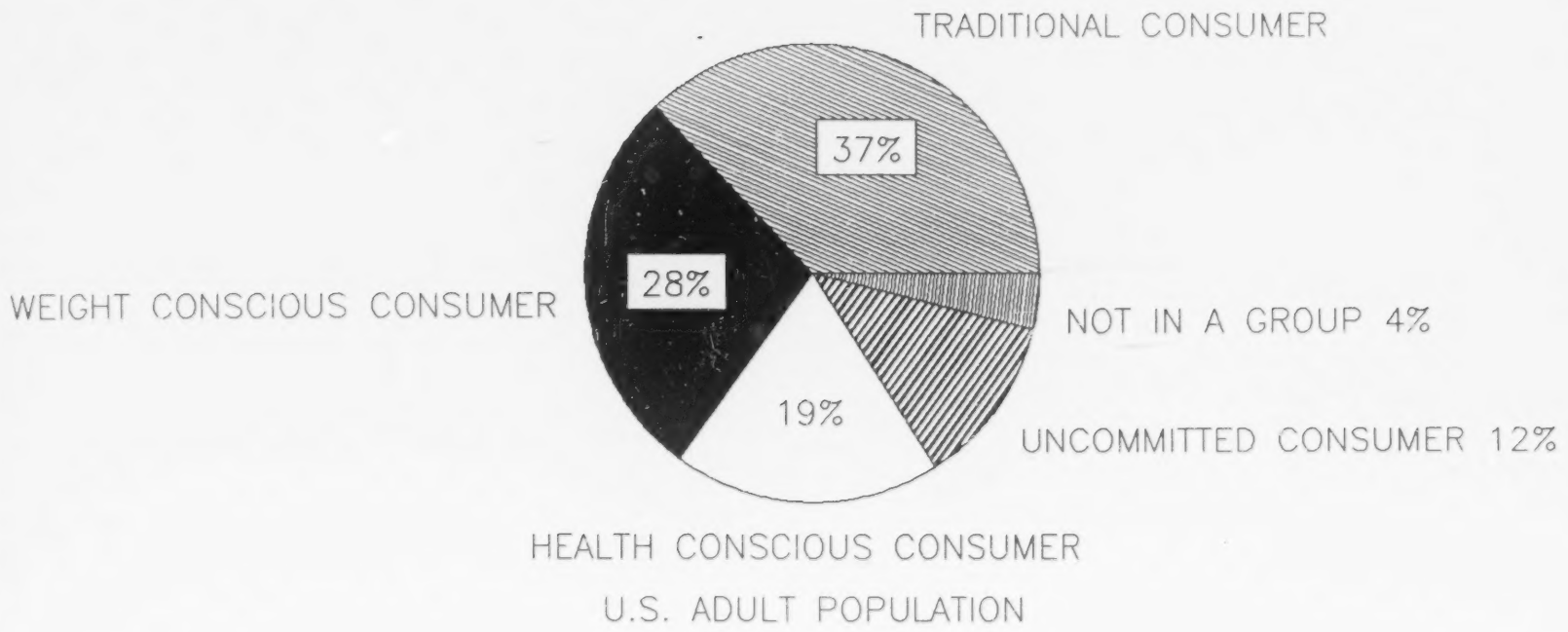
Using this information, respondents were clustered or grouped together so as to provide the greatest amount of with-group similarities and between-group differences. These procedures yielded four consumer segments, 1) traditional consumers, 2) weight conscious consumers, 3) health conscious consumers, and 4) uncommitted consumers. As shown in Figure V.1, together these groups represent 96% of the adult population. The remaining 4% were unclassified, not belonging to any of the four groups and not forming a group by themselves. The remainder of this report discusses each of the 4 consumer segments separately.

One of the analyses performed, canonical discriminant analysis, provides as an output, a plot of the spatial relationships between these groups. Figure V.2 is a representation of this analysis. In considering the relationships between the groups and dimensions on which the groups differ, it is helpful to think of 2 dimensions.

The first dimension could be considered a measure of "health consciousness," with the weight conscious consumer demonstrating the greatest awareness and concern about diet as it relates to health issues and the traditional consumer demonstrating the least concern. The second dimension, though somewhat less significant from a statistical perspective, is still helpful in illustrating the differences between the health conscious and weight conscious consumer. The health conscious consumer has a "light" orientation or self image whereas the weight conscious consumer exhibits a "heavy" orientation. The uncommitted consumer, having some of the characteristics of each of the other groups is positioned towards the center of both axes.

FIGURE V.1

SEGMENTATION



U.S. ADULT POPULATION

FIGURE V.2

SEGMENTATION

V.1 The Traditional Consumer

Traditional consumers are the largest segment representing 37% of the U.S. adult population. They describe themselves as "meat and potatoes" people and as people who "eat what they want whenever they feel like it." They eat what might be considered a classic American diet both at home and away from home, and are less concerned about health and nutrition issues than any of the other groups.

TABLE V.1.1 Self Description

Statement:	Describes Behavior Completely:
"You're a meat & potatoes person"	53%
"You eat what you want whenever you feel like it"	64%

Of the food items included in this study, traditional consumers were more likely than the rest of the adult population to eat or use at home the following items: regular soft drinks, butter, enriched white bread, whole milk, presweetened cereals, hot dogs, and mashed potatoes. They are also less likely to eat at home foods that are low calorie substitutes or specially prepared with restrictive diet needs in mind.

TABLE V.1.2 Foods Eaten At Home In Past Month

Item:	% of Traditional	% of Total Adult Pop.	Pt. Chg.
Regular Soft Drink	71%	56%	+ 15
Butter	75%	62%	+ 13
Whole Milk	58%	46%	+ 12
Enriched White Bread	70%	59%	+ 11
Presweetened Cereal	43%	32%	+ 11
Hot Dogs	64%	56%	+ 8
Mashed Potatoes	75%	69%	+ 6

TABLE V.1.2 Foods Eaten At Home In Past Month (CONTINUED)

Item:	% of Traditional	% of Total Adult Pop.	Pt. Chg.
Skinless Chicken	41%	58%	- 17
Vegetables Cooked Without Salt	50%	64%	- 14
Diet Margarine	25%	36%	- 11
Whole Wheat Bread	64%	75%	- 11
Caffeine-free Coffee	28%	38%	- 11
Reduced Calorie Salad Dressing	29%	39%	- 10
Skim or Low Fat Milk	55%	65%	- 10
Diet Soft Drink	38%	48%	- 10
Sugar Substitute	24%	33%	- 9

The types of foods traditional consumers are likely to try at restaurants is consistent with the types of foods eaten at home. Here, too, they tend to eat foods higher in calories, fat or cholesterol and are less likely to order "light and healthy" menu items.

TABLE V.1.3 Menu Items Likely To Try If Available At Restaurants

Item:	% of Traditional	% of Total Adult Pop.	Pt. Chg.
Steak or Roast Beef	75%	58%	+ 17
Regular Soft Drink	51%	35%	+ 16
Fried Chicken	47%	32%	+ 15
Fried Fish or Seafood	48%	34%	+ 14
Rich, Gooey or Chocolate Dessert	31%	22%	+ 9
Premium Ice Cream	36%	28%	+ 8
Vegetable Seasoned Only With Herbs or Lemon	21%	36%	- 15
Whole Grain Muffins	28%	41%	- 13
Poultry Without Skin	35%	47%	- 12
Reduced Calorie Salad Dressing	18%	30%	- 12
Low fat, low calorie Fruit Based Dessert	15%	25%	- 10
Calorie Controlled Entree	10%	20%	- 10
Raw Vegetable Appetizer	35%	45%	- 10

In keeping with this finding is the relatively small proportion of traditional consumers who try "light and healthy" or special menu items that offer these selections. As shown in Figure V.1.1, the traditional consumer visits restaurants that offer these items as often as the population taken as a whole. They tend, however, not to order specially prepared foods.

Traditional consumers' attitudes are consistent with their behavior. As a group they are less concerned about health and nutrition issues than the rest of the adult population. They disproportionately feel that the most important thing about food is its taste. They do not make a point of ordering foods that are nutritious when eating out or look for foods that are low in fat. Relative to the total population, they also are not as concerned about controlling calories and are even less concerned about the nutritional content of the food they eat when eating out for a special occasion.

TABLE V.1.4 Traditional Consumer Attitudes

Statement:	% of Traditional Strongly Agree	% of Total Adult Pop. Strongly Agree	Pt. Chg.
"The most important thing about food is its taste"	43%	32%	+ 11
"When eating out for a special occasion you are less concerned about the nutritional content of the food you eat"	38%	30%	+ 8
"You are tired of hearing about what is good and bad for you when it comes to food"	38%	31%	+ 7
"You eat more than you should"	35%	30%	+ 5
"You wish that more restaurants in your area offered menu items cooked without salt"	18%	34%	- 16

TABLE V.1.4 Traditional Consumer Attitudes (CONTINUED)

Statement:	% of Traditional Strongly Agree	% of Total Adult Pop. Strongly Agree	Pt. Chg.
"Watching calories is an essential part of controlling your weight"	33%	48%	- 15
"You make a point of ordering foods that are nutritious when eating out"	15%	29%	- 14
"You prefer broiled food to fried foods"	38%	52%	- 14
"You look for low fat foods when you eat out"	9%	21%	- 12

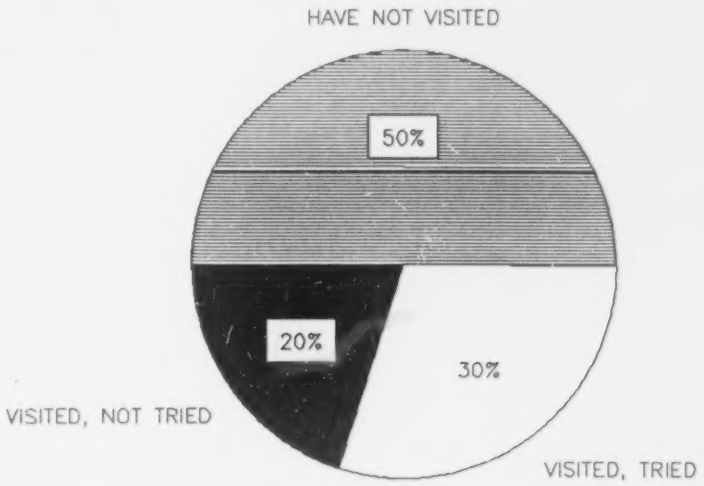
Although over one third (35%) feel that they eat more than they should and 36% feel that they are overweight, only 13% are currently on a diet to lose weight. Consistent with this finding is that, as a group, they are also more tired of hearing about what is good and bad for them when it comes to food.

Compared to the other consumer segments and the total U.S. adult population, traditional consumers do not feel that they eat out any more or less frequently than others do. However, as a percent of total restaurant visits, they represent a disproportionately large share. In total, traditional consumers account for 43% of restaurant visits. Most of these, are at fast food or take out restaurants (63%), followed by family restaurants (28%) and fine dining restaurants (9%).

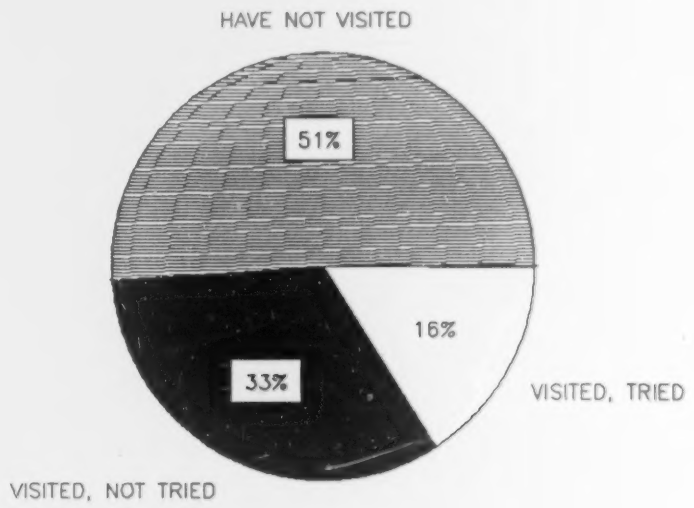
Most traditional consumers are male (61%) and between the ages of 18 and 34 (48%). Most are single (28%) or married without children (28%). Relative to the total adult population, they disproportionately live in rural areas (34%), however most live in suburban areas (45%). Their incomes also tend to be slightly lower than those of all adults in the U.S.

FIGURE V.1.1

RESTAURANTS OFFERING SPECIAL MENU ITEMS



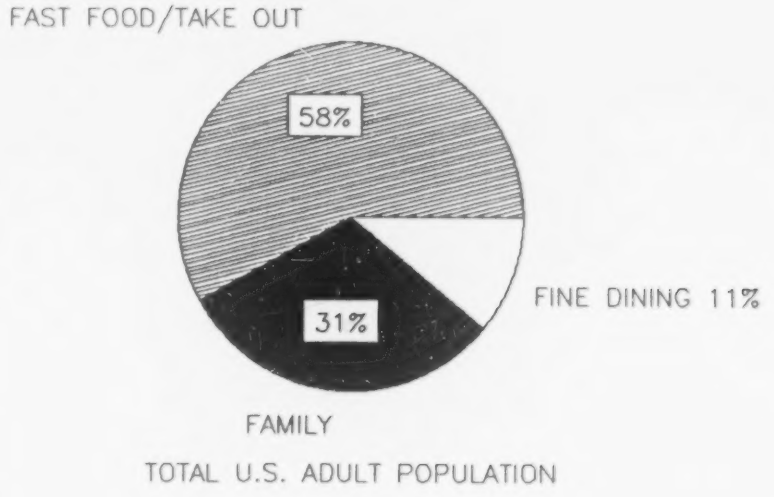
U.S. ADULT POPULATION

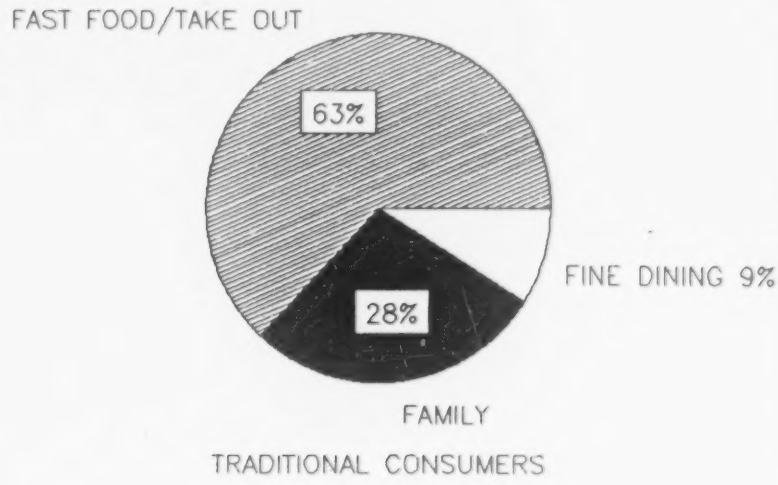


TRADITIONAL CONSUMERS

FIGURE V.1.2

TRADITIONAL CONSUMERS
RESTAURANT VISITS





NOTE: THESE CHARTS ARE BASED ON CATEGORICAL DEFINITIONS. USE OF RAW DATA PRODUCES SLIGHTLY DIFFERENT PERCENTAGES IN SOME CASES.

V.2 The Weight Conscious Consumer

Weight conscious consumers are concerned about calories. Eighty-one percent indicated that "paying attention to the calorie content of the food they eat" describes their behavior completely. They are also concerned about nutrition; 60% indicated that "paying attention to the nutritional content of the food they eat" also describes their behavior completely. At home they use low calorie substitutes to reduce their calorie intake. If available, many indicated that they would be very likely to try these products or specially prepared foods at restaurants.

TABLE V.2.1 Self Description

Statement:	Describes Behavior Completely:
"You pay attention to the calorie content of the food you eat"	81%
"You pay attention the the nutritional content of the food you eat"	60%

At home weight conscious consumers are more likely to use reduced calorie salad dressings, diet soft drinks, diet margarine, and sugar substitutes than the rest of the U.S. adult population. Some also limit their consumption of caffeine and salt through the use of substitute products or alternative food preparation methods.

TABLE V.2.2 Foods Eaten At Home In Past Month

Item:	% of Weight Conscious	% of Total Adult Pop.	Pt. Chg.
Reduced Calorie Salad Dressing	54%	39%	+ 15
Diet Soft Drink	61%	48%	+ 13
Diet Margarine	49%	36%	+ 13
Vegetables Cooked Without Salt	76%	64%	+ 13
Sugar Substitute	45%	33%	+ 12
Caffeine-free Soft Drink	65%	53%	+ 12
Skinless Chicken	68%	58%	+ 10

TABLE V.2.2 Foods Eaten At Home In Past Month (CONTINUED)

Item:	% of Weight Conscious	% of Total Adult Pop.	Pt. Chg.
Regular Soft Drink	46%	56%	- 10
Whole Milk	36%	46%	- 10
Enriched White Bread	50%	59%	- 9
Mexican Food	35%	43%	- 8
Beef	80%	87%	- 7
Butter	56%	62%	- 6
Premium Ice Cream	39%	45%	- 6

TABLE V.2.3 Menu Items Likely To Try If Available At Restaurants

Item:	% of Weight Conscious	% of Total Adult Pop.	Pt. Chg.
Reduced Calorie Salad Dressing	51%	30%	+ 21
Sugar Substitute	39%	25%	+ 14
Calorie Controlled Entree	32%	20%	+ 12
Low Fat, Low Calorie Fruit Based Dessert	37%	25%	+ 12
Diet Soft Drink	41%	30%	+ 11
Raw Vegetable Appetizer	54%	45%	+ 9
Low Cholesterol Egg Substitute	18%	9%	+ 9
Regular Soft Drink	21%	35%	- 14
Steak or Roast Beef	46%	58%	- 12
Fried Fish	23%	34%	- 11
Fried Chicken	22%	32%	- 10
Rich, Gooey or Chocolate Dessert	13%	22%	- 9
Premium Ice Cream	20%	28%	- 8

If these foods or products were available at restaurants, many weight conscious consumers indicated that they would be very likely to try them, particularly reduced calorie salad dressing. Over half have been to restaurants that offer "light and healthy" menu items. Of these, 79% have ordered this type of meal.

Not surprisingly, almost half (46%) of these consumers feel that they are overweight, and over half (53%) are either on a diet to lose weight now or have been

on a diet during the past year. They also exercise more often than most adults, with most (61%) exercising at least every other day.

As with the other consumer segments, the attitudes of the weight conscious consumer are consistent with their behavior. They feel that watching calories is an essential part of controlling their weight. They feel that fried foods are bad for them, and prefer broiled foods to fried foods.

The data also suggest that there is an opportunity to better meet the needs of this consumer group. A disproportionate share strongly agreed with the statement that they "would eat out more often if it wasn't so fattening," they "wish that more restaurants in their area offered menu items cooked without salt", "that more restaurants offered food for people on restrictive diets," and that "food prepared at home is generally more nutritious than food prepared at restaurants."

TABLE V.2.4 Weight Conscious Consumer Attitudes

Statement:	% of Weight Conscious Strongly Agree	% of Total Adult Pop. Strongly Agree	Pt. Chg
"Watching Calories is an essential part of controlling your weight"	75%	48%	+ 27
"You make a point of ordering foods that are nutritious when you eat out"	55%	29%	+ 26
"You look for low fat foods when you eat out"	43%	21%	+ 22
"You wish that more restaurants in your area offered menu items cooked without salt"	55%	34%	+ 21
"You wish that more restaurants in your area offered food for people on restricted diets"	56%	38%	+ 18
"You prefer broiled foods to fried foods	67%	52%	+ 15

TABLE V.2.4 Weight Conscious Consumer Attitudes (CONTINUED)

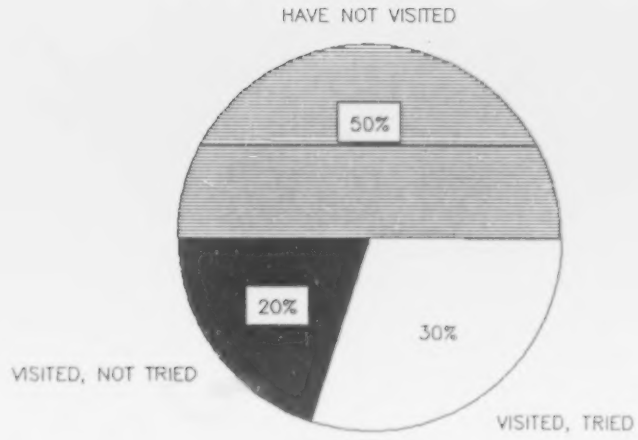
Statement:	% of Weight Conscious Strongly Agree	% of Total Adult Pop. Strongly Agree	Pt. Chg.
"You would eat out more often if it wasn't so fattening"	27%	15%	+ 12
"Fried food is bad for you"	50%	39%	+ 11
"Food prepared at home is generally more nutritious than food prepared at restaurants"	64%	55%	+ 9

When weight conscious consumers eat out, they tend to eat less at fast food restaurants than other groups and more at family or fine dining types of restaurants. Although the number of restaurant visits they account for (25%) is roughly in proportion to their size (28% of the U.S. adult population), their high incomes suggest that they have the ability to eat out more often. Thirty percent of this groups have household incomes greater than $40,000 a year compared to 25% of the total population.

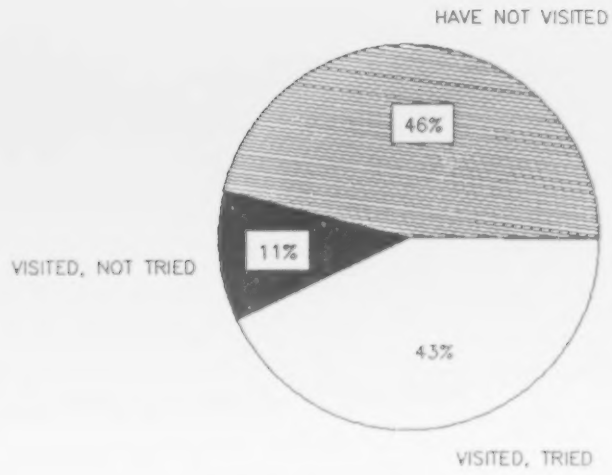
Weight conscious consumers are predominantly female (67%). Sixty-six percent are 35 years of age or older. Most are married (82%), roughly half of which have children (41%). Although most live in suburban areas (46%), they disproportionately live in urban areas (31%).

FIGURE V.2.1

RESTAURANTS OFFERING SPECIAL MENU ITEMS



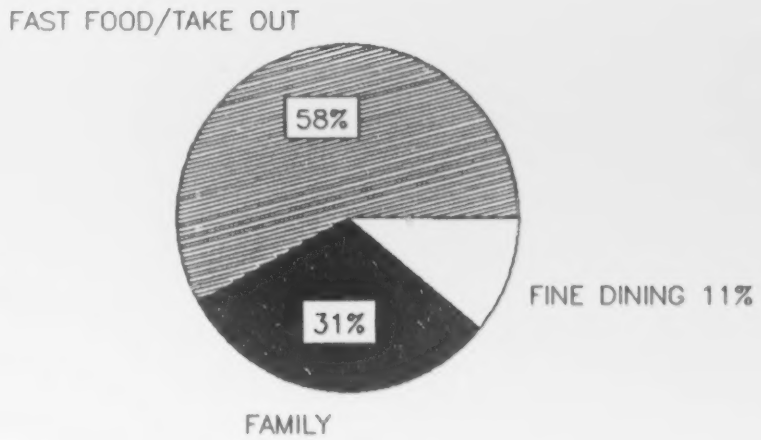
U.S. ADULT POPULATION



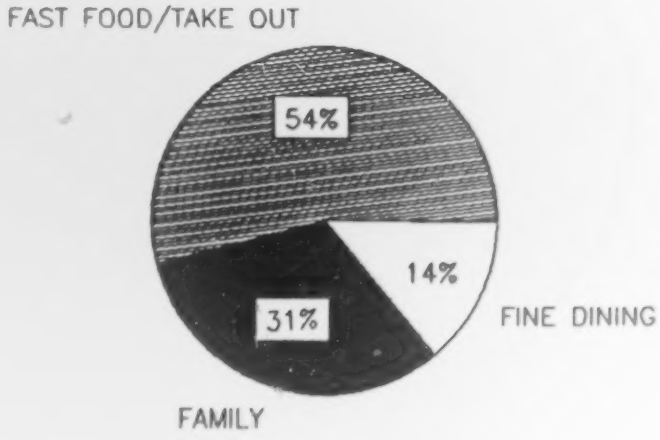
WEIGHT CONSCIOUS CONSUMERS

FIGURE V.2.2

WEIGHT CONSCIOUS CONSUMERS
RESTAURANT VISITS



TOTAL U.S. ADULT POPULATION



WEIGHT CONSCIOUS CONSUMERS

NOTE: THESE CHARTS ARE BASED ON CATEGORICAL DEFINITIONS. USE OF RAW DATA PRODUCES SLIGHTLY DIFFERENT PERCENTAGES IN SOME CASES.

V.3 The Health Conscious Consumer

Health conscious consumers are concerned about the nutritional content of the food they eat. Unlike the weight conscious consumer, they are not especially concerned about calories, nor are they dieters. Included in their diets are starchy foods, such as rice and pasta, but within this food group they tend to select items with a higher nutritional value, such as whole wheat bread instead of white bread. Although some of their behaviors are similar to those of the weight conscious consumer, their attitudes about the foods they eat and the reasons they eat them tend to be different.

TABLE V.3.1 Self Description

Statement:	Describes Behavior Completely:
"You pay attention to the nutritional content of the food you eat"	71%

At home the health conscious consumer eats fewer traditional foods and more exotic or healthful foods. Soft drink consumption is an important discriminating item. The weight conscious consumer will substitute diet soft drinks for regular soft drinks. The health conscious consumer drinks less of any kind of soft drink.

TABLE V.3.2 Foods Eaten At Home In Past Month

Item:	% of Health Conscious	% of Total Adult Pop.	Pt. Chg.
Skinless Chicken	71%	58%	+ 13
Asian/Oriental Foods	54%	45%	+ 9
Fresh Fruit	99%	91%	+ 8
Imported Cheeses	43%	35%	+ 8
Whole Wheat Bread	81%	75%	+ 6
Regular Soft Drink	44%	56%	- 12
Caffeine-free Soft Drink	41%	53%	- 12
Hot Dogs	45%	56%	- 11
Presweetened Cereal	22%	32%	- 10
Diet Soft Drink	39%	48%	- 9

Away from home the health conscious consumer is very likely to try the types of foods eaten at home. If available, the health conscious consumer is likely to try vegetables seasoned only with herbs or lemon juice, whole grain muffins, broiled or baked fish or seafood, and raw vegetable appetizers. They are also more likely than the rest of the population to try poultry cooked without skin, or foods cooked without salt. Unlike the weight conscious consumer, however, they are less likely to try reduced calorie salad dressings or sugar substitutes, probably because of their artificial components. As shown in Figure V.3.1 these findings are consistent with the number of health conscious consumers ordering special menu items when visiting restaurants that offer these selections. They are also somewhat more likely to visit fine dining types of restaurants than the population as a whole.

TABLE V.3.3 Menu Items Likely To Try If Available At Restaurants

Item:	% of Health Conscious	% of Total Adult Pop.	Pt. Chg.
Vegetables Seasoned Only With Herbs or Lemon	55%	36%	+ 19
Whole Grain Muffins	58%	41%	+ 17
Broiled/Baked Fish	78%	63%	+ 15
Raw Vegetable Appetizer	58%	45%	+ 13
Whole Grain Pancakes	39%	29%	+ 10
Regular Soft Drink	26%	35%	- 9
Diet Soft Drink	23%	30%	- 7
Fried Chicken	25%	32%	- 7
Steak/Roast Beef	52%	58%	- 6
Reduced Calorie Salad Dressing	25%	30%	- 5
Sugar Substitute	20%	25%	- 5

Where the weight conscious and health conscious consumers differ the most is in their attitudes. Health conscious consumers do not feel and act in a way that suggests they are depriving themselves. Health conscious consumers are not meal skippers. They do not feel that foods that are good for them do not taste good, or that the most important thing about food is its taste. Rather, these consumers appear to have embraced a life style where health, nutrition, and exercise is a part of daily life.

TABLE V.3.4 Health Conscious Consumer Attitudes

Statement:	% of Health Conscious Strongly Agree	% of Total Adult Pop. Strongly Agree	Pt. Chg.
"Watching calories is an essential part of controlling your weight"	39%	48%	- 11
"The most important thing about foods is its taste"	23%	32%	- 9
"You eat more than you should"	21%	30%	- 9
"Breakfast is the one meal a person can skip without any bad effects"	7%	14%	- 7
"When eating out for a special occasion you are less concerned about the nutritional content of the food you eat"	23%	30%	- 7
"When you eat out you eat foods that are different from the foods you eat at home"	39%	45%	- 6
"Low calorie means less taste"	11%	14%	- 3
"Foods that are good for you usually don't taste good"	9%	9%	- 0

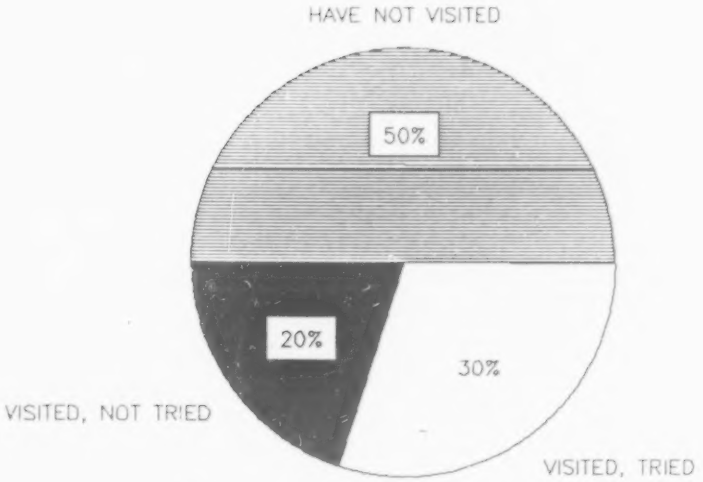
TABLE V.3.5 Exercise Frequency

Exercise Per Week:	% of Health Conscious	% of Total Adult Pop.	Pt. Chg.
None/<Once	18%	23%	- 5
1 - 2 Times	15%	22%	- 7
3 - 4 Times	28%	26%	+ 2
5+ Times	39%	29%	+ 10

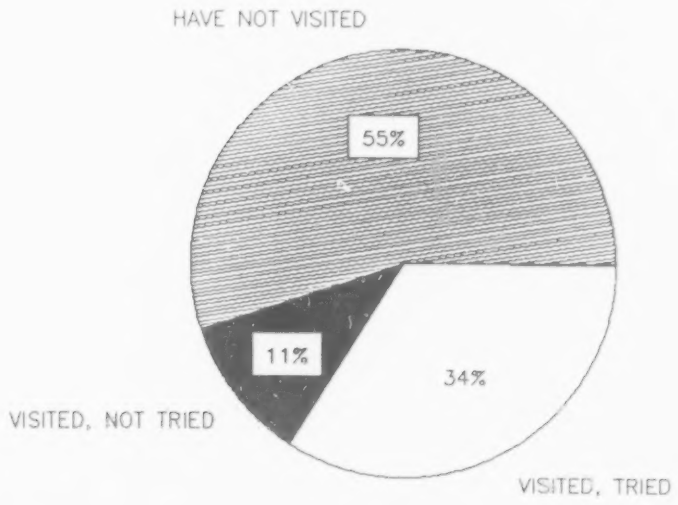
Health conscious consumers are somewhat more likely to be female (59%). The age distribution of this consumer segment skews somewhat towards the older age groups, i.e. 34% are 55 years of age or older. Most are married without children living at home (43%). Their most distinguishing demographic characteristic is that they tend to be more highly educated, with 65% having at least attended some college.

FIGURE V.3.1

RESTAURANTS OFFERING SPECIAL MENU ITEMS



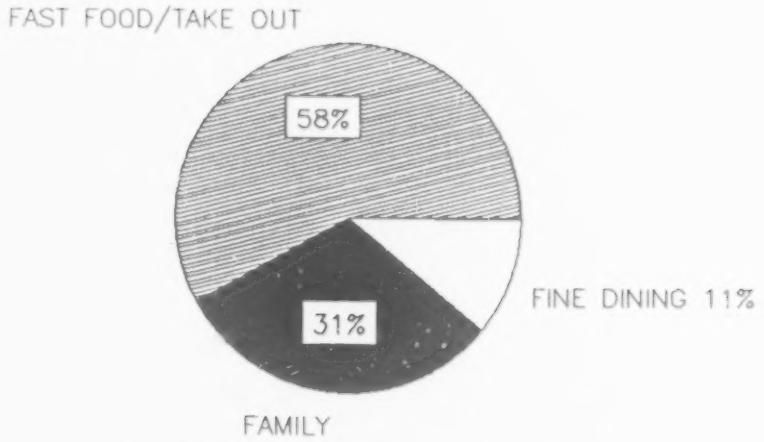
U.S. ADULT POPULATION



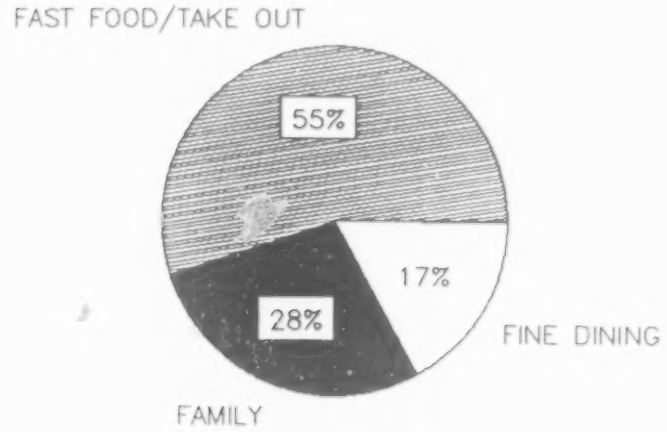
HEALTH CONSCIOUS CONSUMERS

FIGURE V.3.2

HEALTH CONSCIOUS CONSUMERS
RESTAURANT VISITS



TOTAL U.S. ADULT POPULATION



HEALTH CONSCIOUS CONSUMERS

NOTE: THESE CHARTS ARE BASED ON CATEGORICAL DEFINITIONS. USE OF RAW DATA PRODUCES SLIGHTLY DIFFERNET PERCENTAGES IN SOME CASES.

V.4 The Uncommitted Consumer

The uncommitted consumer is the smallest of the four consumer segments and the most difficult to define. Unlike the other consumer segments, their attitudes and behavior are inconsistent. Although they tend to eat many foods both at home and away from home which are either low in calories or prepared with health and nutrition concerns in mind, they do not behave this way deliberately. They do not, for example, make a point of eating foods that are "nutritious," lots of fruits and vegetables, or three well balanced meals each day. Rather, they tend to skip at least one meal a day or eat many small meals and snacks.

TABLE V.4.1 Self Description

Statement:	Describes Behavior Completely:
"You often skip at least one meal each day"	67%
"You prefer to eat many meals and snacks throughout the day rather than the standard three full meals a day"	29%

At home uncommitted consumers eat an eclectic menu, including vegetables cooked without salt, diet soft drinks, and skinless chicken from the list of low calorie and specially prepared foods included in the survey. They also tend to eat more premium ice cream and whole wheat bread than the population as a whole and drink more wine.

TABLE V.4.2 Foods Eaten At Home In Past Month

Item:	% of Uncommitted	% of Total Adult Pop.	Pt. Chg.
Vegetables Cooked Without Salt	76%	64%	+ 12
Diet Soft Drink	60%	48%	+ 12
Premium Ice Cream	57%	45%	+ 12
Wine	46%	36%	+ 10
Whole Wheat Bread	85%	75%	+ 10
Skinless Chicken	67%	58%	+ 9

TABLE V.4.2 Foods Eaten At Home In Past Month (CONTINUED)

Item:	% of Uncommitted	% of Total Adult Pop.	Pt. Chg.
Mashed Potatoes	60%	69%	- 9
Butter	55%	62%	- 7
Enriched White Bread	52%	59%	- 7
Whole Milk	43%	46%	- 3

Although these consumers eat many of the foods included in a more traditional diet, such as pizza (75%) and hot dogs (57%), they are also eating less mashed potatoes, butter, enriched white bread, and whole milk. It seems as though these consumers are in a state of transition. One hypothesis is that the vast amount of public information about health and nutrition is subtly making changes in the American diet. That the culture is so pervasive that those who are changing are not even fully aware of the changes they are making.

At restaurants the uncommitted consumers behavior resembles that at home. As shown in Figure V.4.1, many have at least tried specially prepared menu items. Relative to the population as a whole, the most dramatic difference in their behavior is less red meat consumption, with only 37% very likely to order steak or roast beef, and their likelihood to order broiled foods instead of fried foods.

TABLE V.4.3 Menu Items Likely To Try If Available At Restaurants

Item:	% of Uncommitted	% of Total Adult Pop.	Pt. Chg.
Whole Wheat Bread, Rolls or Crackers	73%	60%	+ 13
Poultry Without Skin	54%	47%	+ 7
Diet Soft Drink	35%	30%	+ 5
Broiled or Baked Fish or Seafood	67%	63%	+ 4
Steak or Roast Beef	38%	58%	- 20
Fried Chicken	15%	32%	- 17
Fried Fish or Seafood	20%	34%	- 14
Lean Meat	52%	64%	- 12

The attitudes of uncommitted consumers support the hypothesis mentioned above. Unlike the health conscious and weight conscious consumer, the uncommitted consumers behavior is less conscious or deliberate. Notably, they are also receptive to receiving information about health and nutrition.

TABLE V.4.4 Uncommitted Consumer Attitudes

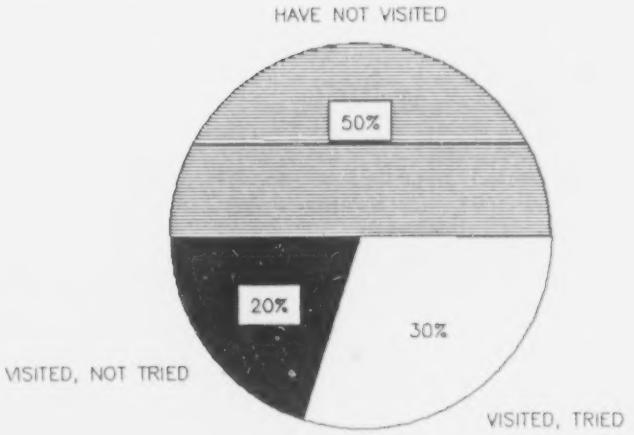
Statement:	% of Uncommitted Strongly Agree	% of Total Total Adult Strongly Agree	Pt. Chg.
"You make a point of ordering foods that are nutritious when you eat out"	11%	29%	- 18
"Being in peak physical shape is important to you"	44%	61%	- 17
"Eating a lot of fruits and vegetables is important to you"	57%	71%	- 14
"Your favorite type of restaurant is one where everything is made from scratch"	35%	47%	- 12
"You are tired of hearing about what is good and bad for you when it comes to food"	19%	31%	- 12
Expensive restaurants ought to serve fresh rather than frozen food"	45%	56%	- 11
"You would eat out more often if it wasn't so fattening"	6%	15%	- 9
"You look for low fat foods when you eat out"	14%	21%	- 7

Uncommitted consumers think of themselves as people who eat out often. Over half, 52%, indicated that they thought they eat out frequently, as compared to 31% of the population as a whole. In fact, however, they eat out roughly in proportion to the percent of the population they represent accounting for 12% of all restaurant visits. When uncommitted consumers do eat out, they tend to eat at fast food or family types of restaurants.

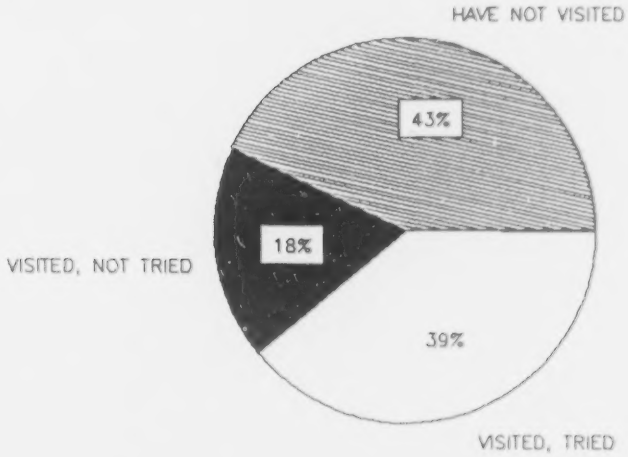
An uncommitted consumer is just as likely to be male (50%) as female (50%). A disproportionate share work full time, 64%, with many between the ages of 35 and 44. Almost all are married (91%), tending to live in suburban areas (56%). Perhaps the most affluent of all the consumer segments, 40% have household incomes in excess of $40,000 a year.

FIGURE V.4.1

RESTAURANTS OFFERING SPECIAL MENU ITEMS



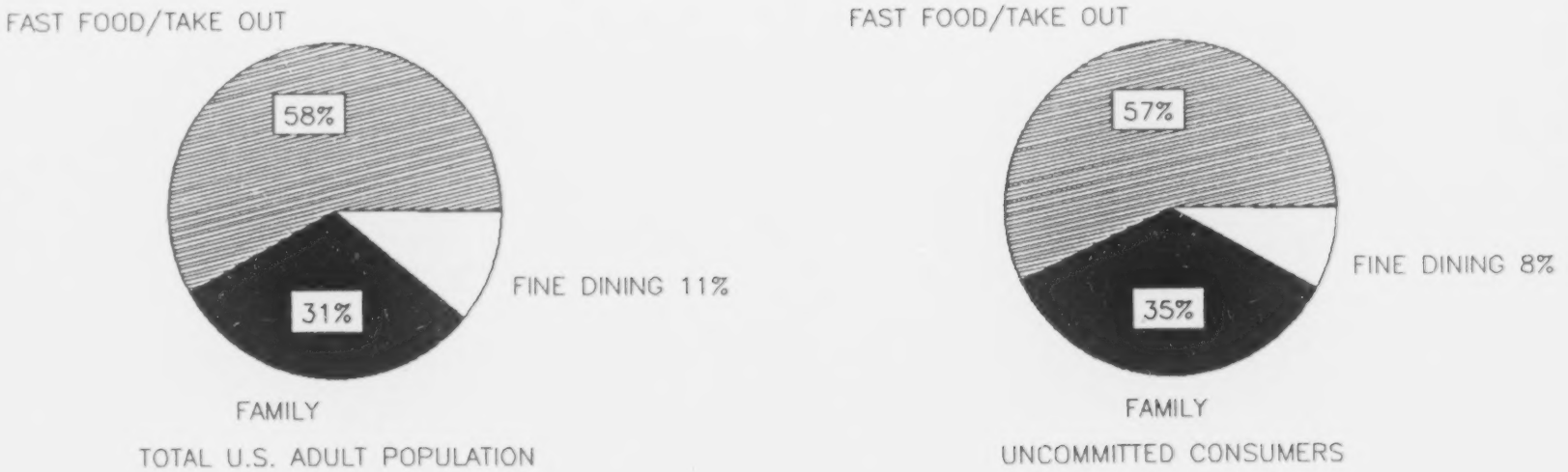
U.S. ADULT POPULATION



UNCOMMITTED CONSUMERS

FIGURE V.4.2

UNCOMMITTED CONSUMERS
RESTAURANT VISITS



NOTE: THESE CHARTS ARE BASED ON CATEGORICAL DEFINITIONS. USE OF RAW DATA PRODUCES SLIGHTLY DIFFERENT PERCENTAGES IN SOME CASES.

APPENDIX A

QUESTIONNAIRE

#919102

Start Time:_____

RESTAURANT HEALTH AND NUTRITION STUDY

INTRODUCTION: Hello, my name is _____. I am calling you from Westat, an independent research company in Rockville, Maryland. Today we are conducting a survey about peoples eating habits both at home and at restaurants. By answering our questions you will be helping restaurants across the country better serve their customers. The information that you provide will be strictly confidential. Your cooperation would be greatly appreciated.

A. First I need to verify that I have dialed correctly. Is this _____ _____?
Area Code Telephone Number

YES.....1
NO.....2 (TERMINATE)

B. Is this a residential telephone?

YES.....1
NO.....2 (TERMINATE)

C. So that I can identify the person I should speak with, please tell me how many members of your household are 18 years of age or older and the age of each, starting with the oldest.

AGE

MEMBER 1 _____
MEMBER 2 _____
MEMBER 3 _____
MEMBER 4 _____

USE SAMPLING SHETT AND ASK TO SPEAK WITH SELECTED PERSON. REPEAT INTRODUCTION IF NECESSARY.

1. In the past two weeks approximately how many times have you eaten a meal or snack or ordered take-out or home delivery foods and beverages from:

a. Fast food or take-out restaurant? _____
b. Family or moderately priced restaurant? _____
c. Fine dining or atmosphere restaurant? _____

TOTAL: _____

2. Do you think of yourself as someone who eats-out:

Frequently 1
Occasionally 2
Infrequently 3

3. How well informed do you feel you are about issues related to health and nutrition? Would you say:

Very Informed.....1
Somewhat Informed.....2
Somewhat Uninformed.....3
Not at all knowledgeable.....4

4. Do you consciously restrict your use of:

	YES	NO
Salt	1	2
Additives, such as artificial flavors and colors	1	2
Sugar	1	2
Foods high in cholosterol	1	2
Foods high in fat	1	2

5. Do you consciously eat:

	YES	NO
Foods high in fiber	1	2
Foods high in calcium	1	2
Starchy foods like rice, pasta, and whole grain breads	1	2

6. Do you take vitamins or minerals to supplement your diet?

YES.....1
NO.....2

7. Do you consider yourself overweight?

YES.....1
NO.....2

8. Are you currently on a diet to lose weight?

YES.....1 (Q10)
NO.....2

9. Have you been on a diet to lose weight during the past year?

YES.....1
NO.....2

10. How often do you exercise? Would you say:

Not at all 1
Less than once a week 2
1 - 2 times a week.....3
3 - 4 times a week.....4
Five or more times a week 5

11. Have you ever been to a restaurant or fast food place that offers light and healthy items, low calorie meals, or foods specially prepared with restrictive diet needs in mind?

YES.....1
NO.....2 (Q14)

12. Have you ever ordered any of these special menu items?

YES.....1
NO.....2 (Q14)

13. How often do you order these menu items? Would you say:

All of the time.....1
Most of the time.....2
Sometimes.....3
Infrequently.....4
Only tried them once or twice.....5

14. Next I am going to read to you a list of foods and beverages. Please tell me whether you personally have used or eaten any of these items at home in the past month. (START WITH THE STATEMENT OPPOSITE THE CHECKMARK. READ LIST. CIRCLE APPROPRIATE RESPONSE)

	YES	NO
Vegetables cooked without salt....	1	2
Tossed Salad.....	1	2
Diet Margarine.....	1	2
Wine.....	1	2
Whole Wheat Bread.....	1	2
Enriched White Bread.....	1	2
Skim Milk or Low Fat Milk.....	1	2
Whole Milk.....	1	2
Ready-to-eat Natural Cereal.....	1	2
Sugar Substitute.....	1	2
Reduced Calorie Salad Dressing....	1	2
Beef.....	1	2
Skinless Chicken.....	1	2
Asian/Oriental Foods.....	1	2
Mexican Foods.....	1	2
Salt Substitute.....	1	2
Pre-Sweetened Cereal.....	1	2
Hot Dogs.....	1	2
Pizza.....	1	2
Imported Cheese.....	1	2
Mashed Potatoes.....	1	2
Butter.....	1	2
Caffeine-free Soft Drinks.....	1	2
Diet Soft Drinks.....	1	2
Regular Soft Drinks.....	1	2
Fruit Juice.....	1	2
Fresh Fruit.....	1	2
Premium Ice Cream.....	1	2
Caffeine-free coffee.....	1	2

15. Next is a list of foods and beverages that some restaurants offer their customers. If available, how likely would you be to try each one? Would you say "very likely," "somewhat likely," "somewhat unlikely," "very unlikely," or "would never use or order." (START WITH STATEMENT OPPOSITE THE CHECKMARK.)

	VL	SL	SUL	VUL	N
Raw Vegetable Appetizer.....	1	2	3	4	5
Calorie Controlled Entree.....	1	2	3	4	5
Food cooked without salt.....	1	2	3	4	5
Whole Wheat Breads, or Rolls or Crackers.....	1	2	3	4	5
Vegetables seasoned only with herbs or lemon juice.....	1	2	3	4	5
Low fat, low calorie fruit based desserts.....	1	2	3	4	5
Rich, gooey or chocolate desserts	1	2	3	4	5
Reduced Calorie Salad Dressing...	1	2	3	4	5
Lean Meats.....	1	2	3	4	5
Steak or Roast Beef.....	1	2	3	4	5
Poultry without Skin.....	1	2	3	4	5
Fried Chicken.....	1	2	3	4	5
Cereal served with Skim Milk or Low Fat Milk.....	1	2	3	4	5
Whole Grain Muffins.....	1	2	3	4	5
Whole Grain Pancakes or Waffles..	1	2	3	4	5
Low Cholesterol Egg Substitute...	1	2	3	4	5
Fresh Fruit.....	1	2	3	4	5
Low Fat Cottage Cheese.....	1	2	3	4	5
Bagel or Breads with Low Fat Cream Cheese.....	1	2	3	4	5
Sugar Substitute.....	1	2	3	4	5
Regular Soft Drink.....	1	2	3	4	5
Diet Soft Drink.....	1	2	3	4	5
Caffeine-free Soft Drink.....	1	2	3	4	5
Caffeine-free coffee.....	1	2	3	4	5
Broiled or Baked Fish or Seafood	1	2	3	4	5
Fried Fish or Seafood.....	1	2	3	4	5
Premium Ice Cream.....	1	2	3	4	5
Fruit Ices or Sorbet.....	1	2	3	4	5

16. Now I am going to read a number of statements. Please tell me how strongly you agree or disagree with each one. Use a scale from 1 to 5 where 1 is "strongly agree," 2 is "somewhat agree," 3 is "neither agree nor disagree," 4 is "somewhat disagree," and 5 is "strongly disagree." (START WITH STATEMENT OPPOSITE THE CHECKMARK. IF NECESSARY, REPEAT INSTRUCTION FOR FIRST FEW STATEMENTS.)

	Strongly Agree				Strongly Disagree
It's OK to snack between meals.....	1	2	3	4	5
Fried food is bad for you	1	2	3	4	5
Breakfast is the one meal a person can skip without any bad effects..	1	2	3	4	5
You are often concerned about your health.....	1	2	3	4	5
Being in peak physical condition is important to you.....	1	2	3	4	5
It's important to eat 3 well balanced meals each day..	1	2	3	4	5
Regular exercise is vital to your health.....	1	2	3	4	5
You eat more than you should	1	2	3	4	5
Watching calories is an essential part of controlling your weight...	1	2	3	4	5
Good diet and nutrition play a role in the prevention of serious illnesses such as heart disease and cancer...	1	2	3	4	5
Food prepared at home is generally more nutritious than food prepared at restaurants.....	1	2	3	4	5
Low calorie means less taste	1	2	3	4	5
Eating a lot of fruits and vegetables is important to you.....	1	2	3	4	5
The most important thing about food is its taste...	1	2	3	4	5
Foods that are good for you usually don't taste good..	1	2	3	4	5
There is no difference in taste between fresh and frozen foods served in restaurants.....	1	2	3	4	5
Expensive restaurants ought to serve fresh rather than frozen foods.....	1	2	3	4	5
You prefer broiled foods to fried foods.....	1	2	3	4	5
It's important to eat a lot of red meat.....	1	2	3	4	5
You are concerned about how much alcohol you consume for health reasons.....	1	2	3	4	5
You are concerned about how much alcohol you consume when drinking and driving..	1	2	3	4	5

	Strongly Agree				Strongly Disagree
You are drinking less alcohol when you eat out than you did two years ago.....	1	2	3	4	5
Restaurants ought to offer different size portions for different size appetites.....	1	2	3	4	5
Restaurants ought to offer meals specially prepared for children.....	1	2	3	4	5
You prefer reastaurants that feature salad bars.....	1	2	3	4	5
When you eat out you eat foods that are different from the foods you eat at home.....	1	2	3	4	5
You would eat out more often if it wasn't so fattening.	1	2	3	4	5
When eating out for a special occasion you are less concerned about the nutritional value of the food you eat.....	1	2	3	4	5
Your favorite type of restaurant is one where everything is made from scratch.....	1	2	3	4	5
You make a point of ordering foods that are nutritious when eating out.....	1	2	3	4	5
You wish that more restaurants in your area offered food for people on restrictive diets.....	1	2	3	4	5
You are tired of hearing about what's good and bad for you when it comes to food.....	1	2	3	4	5
You look for low fat foods when you eat out.....	1	2	3	4	5
You wish that more restaurants in your area offered menu items cooked without salt...	1	2	3	4	5

17. The following statements describe different kinds of eating behavior. Please tell me how well these statements describe your eating behavior most of the time. Use a scale from "1" to "5" where 1 "describes your behavior completely," 2 " is "very descriptive," 3 is "somewhat descriptive," 4 is "not very descriptive," and 5 "doesn't describe your behavior at all." (START WITH STATEMENT OPPOSITE THE CHECKMARK.)

	Describe Completely				Not at all Descriptive
You often skip at least one meal each day.....	1	2	3	4	5
You pay attention to the nutritional content of the food you eat.....	1	2	3	4	5
You pay attention to the calorie content of the food you eat.....	1	2	3	4	5
You're a "meat and potatoes" person.....	1	2	3	4	5
Other members of your family affect what you eat.....	1	2	3	4	5
You eat what you want whenever you feel like it.....	1	2	3	4	5
You prefer to eat many small meals or snacks throughout the day rather than the standard three full meals a day....	1	2	3	4	5

I would like to ask you just a few more questions which will be used only for statistical purpose.

18. Do you have any other residential telephone <u>numbers</u> in addition to _____ in your home?
Telephone Number

YES.....1
NO.....2

19. Do you work part-time or full time outside your home? (DO NOT READ)

PART TIME 1
FULL TIME 2
DO NOT WORK 3

20. What is your marital status?

Single/Never Married..1
Married 2
Separated/Divorced....3
Widowed 4

21. Are there any children under the age of 18 living in your home?

YES 1
NO 2 (Q23)

22. How many children are:

	NUMBER OF CHILDREN
Under 6 years old	_____
6 to 12 years old	_____
13 to 17 years old	_____

23. Which of the following describes your level of education?

No high school.....1
Some high school 2
High school graduate 3
Some college 4
College graduate 5
Some graduate education 6
Graduate Degree 7

24. Is your total household income before taxes over or under $30,000?

Under $30,000 .....1 (Q24.a)
Over or equal to $30,000.....2 (Q24.b)
Refused.....7
Don't know.....8

a. Is it under $10,000?.....1
Under $20,000.....2
$20,000 or over.....3
Refused.....7
Don't know.....8

b. Under $40,000?.....1
Under $50,000.....2
Under $60,000.....3
$60,000 or more.....4
Refused.....7
Don't Know.....8

25. Please tell me if you are between the ages of:

18-24.....1
25-34.....2
35-44.....3
45-54.....4
55-64.....5
65-74.....6
75 or more.....7

26. Which of the following best describes the area that you live in?

Urban 1
Suburban 2
Rural 3

27. Which of the following best describes your racial origin?

White 1
Black 2
Hispanic 3
Other 4

28. DO NOT ASK: SEX:

MALE 1
FEMALE 2

This concludes the interview. Thank you for your time and cooperation.

APPENDIX B

METHODOLOGY

I. Objectives

Westat conducted a telephone survey to assess consumer awareness of and attitudes towards health and nutrition issues. Information was also gathered to determine how these attitudes influence the choice of foods and restaurants. The primary objective was to identify consumer segments using behavioral and attitudinal measures as a basis for segmentation and to describe each group.

II. Sample Design

The sampling unit for this survey was an adult household member. Households were selected at random across the United States using a Waksberg Random Digit Dialing (RDD) technique. Once a household was contacted, interviewers identified all household members 18 years of age or older and randomly selected a respondent. In the event the household member selected at random was not available, call-backs were made until the interview was completed or refused. Using these procedures we achieved a 52% response rate.

III. Questionnaire Design

Westat and NRA staff jointly designed the questionnaire for this survey. A copy of the questionnaire is included in this report.

The questionnaire consists of behavioral, attitudinal, and demographic questions. Included are lists of food items eaten at home and menu items that might be served at restaurants. Respondents were asked to indicate whether they had used or eaten any of the items at home during the past month and whether they might be likely to try the menu items at a restaurant.

The questionnaire also contains a list of attitudinal and behavioral statements. Respondents were asked the extent to which they agreed or disagreed with these statements using a scale of 1 to 5, where 1 indicated that they "strongly agreed" and where 5 indicated that they "strongly disagreed."

Finally, respondents were asked a series of seven self-descriptive statements. Using a scale of 1 to 5, respondents were asked the extent to which each statement described their eating behavior, where 1 indicated that the statement was

"completely descriptive" and where 5 indicated that the statement "doesn't describe your behavior at all."

We feel that it is important to note that we recognized the potential non-response biases associated with long lists of questions. To compensate for this, a rotate start procedure was used to control the questioning sequence. Specifically, for questions 14 through 17 each questionnaire was marked to indicate a random starting point for each list. Starting at this point, proceeding down the list, and then returning to the top of the list, respondents were asked to respond to each question or statement. Fortunately, we experienced very little non-response with virtually all the respondents cooperating with this long questioning sequence.

IV. Field Work

Westat conduct a pre-test of the questionnaire prior to starting the data collection process. The pre-test consisted of 10 completed interviews with respondents selected at random in the local calling area. A member of the NRA staff attended the pre-test and, based on the results, we made minor modifications to the questionnaire.

All interviewers participating in the study attended a training program specifically designed for this project. The training program consisted of a review of the study objectives, a question-by-question review of the survey instrument, and practice role-playing sessions. This is in addition to General Interviewer Training, which all Westat interviewers receive covering general interviewing techniques and work procedures.

The field period for the Health and Nutrition Study began on February 27, 1986 and ended on March 21, 1986. All interviewing was conducted from the Westat Telephone Research Center in Rockville, MD. Westat completed a total of 813 interviews, slightly more than the 800 interviews initially planned.

V. Quality Control Procedures

As a quality control measure, 10 percent of the interviews were monitored by supervisors to ensure that the interviewing procedures were being properly followed. In addition, all questionnaires were edit checked in data processing for proper coding, and were returned to the Telephone Center for correction of problems.

VI. Data Processing

The survey data were coded, edit checked, and keyed for computer input. All cases were keyed a second time (key verification) in order to virtually eliminate all keying errors. A computer edit was additionally performed on the data set to detect range and skip pattern errors.

VII. Weighting

The survey data were weighted to reflect the total U.S. population. This weighting was conducted to compensate for unequal probabilities of selection and to balance the data to more closely match known totals for important demographic groups.

VIII. Analysis

A combination of univariate and multivariate techniques were used to analyze the data and identify consumer groups.

As a first step, Westat reviewed the raw data gathered during the survey. This process was helpful in identifying basic response patterns. We found that, on average, respondents indicated that two of the seven statements in question 17 described their behavior completely, and that only 36 respondents indicated that none of the statements either described their behavior completely or were very descriptive.

Then, using respondents' self-described behavior, we examined the correlation between each of the seven responses. We found that "paying attention to the nutritional content of the food you eat" was strongly correlated with "paying attention to the calorie content of the food you eat," a correlation coefficient of .54. The other correlations, however, appeared weaker and, for the most part, we were not able to identify a consistent pattern of response.

Turning to the behavioral and attitudinal data collected in questions 14 through 16, 91 questions were asked of each respondent. In order to reduce redundancies, we decided to conduct a factor analysis. As a result, we developed 27 factors from the original 91 variables.

We feel that it is important to note that no single factor accounted for more than 2.8% of the variance. This suggested that the data set was not only highly fragmented, but also that consumers' eating behavior and attitudes toward health and nutrition are highly complex issues.

We then proceeded to conduct a discriminant analysis. We used responses to question 17 as the dependent variables and respondents' factor scores as the independent variables. Then, using the seven self-descriptive statements in question 17 we defined seven groups. The decision rule we used to define group membership was that if a respondent indicated that the statement completely described their behavior, i.e. a response of 1, then that respondent was in the group. Any other response or non-response indicated that the respondent was not in the group.

A total of 8 discriminant analyses were performed; one for each self-descriptive statement, and one for the individuals who indicated that none of the statements described their behavior completely.

We then compared the mean scores for each of the factors across all of the groups, i.e. mean factor scores for respondents in group 1 compared to mean factor scores for respondents in group 2, group 3, group 4, group 5, group 6, group 7 and group 8. Through this process, we identified those groups exhibiting a similarity in their responses and those exhibiting the greatest differences.

Using these findings as a guide, we developed operational definitions of group membership to assign each respondent to one and only one group. We then used responses to behavioral questions 3 through 10 as a "common sense" validation to our approach. We found that the groups, as defined, could not only be supported by the data collected in questions 14 through 17, but that the responses to the remaining sections of the questionnaire were internally consistent.

As a last step in this process, we conducted a canonical discriminant analysis to determine the dimension on which each group differed from each other. The results were used to map the spatial relationships between the groups and to describe the areas of similarity and difference.

APPENDIX C

OVERVIEW DATA

FREQUENCY OF ORDERING FROM RESTAURANTS

All respondents were asked approximately how many times in the past two weeks they had eaten a meal, snack or ordered take-out or home delivery from fast food, family and fine dining restaurants.

Fast food and take out establishments seem to be the most popular among those who ate out six or more times during the two week period. Fourteen percent reported ordering from fast food establishments six or more times while four percent did so from family restaurants and one percent from fine dining establishments.

Frequency of Ordering From Restaurants
During a Two Week Period

Incidence	All Restaurants %	Fast-Food Take-Out %	Family/ Mod. Priced %	Fine dining Atmosphere %
None	17	32	41	71
Once	9	13	23	19
Twice	14	17	18	5
Three Times	10	11	7	2
Four Times	10	8	4	1
Five Times	10	6	3	1
Six or More Times	30	14	4	1

FOOD USED AT HOME

Respondents were given a list of foods and asked whether or not they had used them at home during the past month. Below, they are listed in rank order with the percent responding affirmatively.

Rank	Item	Percent have used in past months
1	Fresh fruit	91%
2	Fruit juice	89%
3	Tossed salad	88%
4	Beef	87%
5	Whole wheat bread	75%
6	Pizza	70%
7	Mashed potatoes	69%
8	Skim or low fat milk	65%
9	Vegetables cooked without salt	64%
10	Butter	62%
11	Ready-to-Eat cereal	60%
12	Enriched white bread	59%
13	Skinless chicken	58%
14	Regular soft drinks	56%
15	Hot dogs	56%
16	Caffeine-free soft drinks	53%
17	Diet soft drinks	48%
18	Whole milk	46%
19	Premium ice cream	45%
20	Asian/Oriental food	45%
21	Mexican foods	43%
22	Reduced Calorie salad dressing	39%
23	Caffeine-free coffee	38%
24	Diet margarine	36%
25	Wine	36%
26	Imported Cheese	35%
27	Sugar substitute	33%
28	Pre-sweetened cereal	32%
29	Salt substitute	17%

ITEMS LIKELY TO TRY IN RESTAURANTS

Survey participants were asked how likely they would be to try particular items in restaurants. Below, they are ranked in descending order of popularity.

Rank	Item	Percent Very Likely To Try
1	Fresh fruit	78%
2	Lean meats	64%
3	Broiled/baked fish or seafood	63%
4	Whole wheat breads, rolls, crackers	60%
5	Steak or roast beef	58%
6	Poultry without skin	47%
7	Raw vegetable appetizer	45%
8	Whole grain muffins	41%
9	Vegetables seasoned with herbs or lemon juice only	36%
10	Food cooked without salt	36%
11	Regular soft drink	35%
12	Fried fish/seafood	34%
13	Low fat cottage cheese	33%
14	Cereal with low fat or skim milk	33%
15	Fried chicken	32%
16	Reduced calorie salad dressing	30%
17	Diet soft drink	30%
18	Caffeine free soft drink	30%
19	Whole grain pancake/waffles	29%
20	Caffeine free coffee	28%
21	Premium ice cream	28%
22	Low fat, low calorie, fruit-based desserts	25%
23	Sugar substitutes	25%
24	Bagel/bread with low fat cream cheese	24%
25	Rich, gooey or chocolate dessert	22%
26	Fruit ice/sorbet	22%
27	Calorie controlled entree	20%
28	Low cholesterol egg substitute	9%

PATRONIZATION OF RESTAURANTS WITH LIGHT AND HEALTHY FARE

Respondents were asked: if they'd ever been to a restaurant that offers light and healthy items, low calorie meals or foods specially prepared with restrictive diet needs in mind; whether they have ordered these special items; and how often they do so.

- Half of the respondents have been to a restaurant that offers light and healthy items. Among those who have been to such a restaurant, six out of ten report ordering special meals. Among those who have ordered special meals, only about one fourth (23%) order them all or most of the time.

- Groups more likely to have ordered special menu items. (Based on those who have been to such a restaurant.)

Nonworking women	69%
Women 35-44 yrs	83%
55-64 yrs.	73%
Men, 65 yrs. and older	73%
Those with incomes over $40,000	71%
Dieters	79%

- Groups more likely to order special items all or most of the time. (Based on those who have ordered special meals.)

Women	35-44 yrs	37%
	35-64 yrs.	30%
	65 yrs. and older	35%
Men	55-64 yrs. old	31%
	65 yrs. and older	48%
Those with income less than $20,000		36%
Those married w/o children		35%

LIKELIHOOD OF TRYING SPECIAL MENU ITEMS IN RESTAURANTS

The groups listed below are more likely than average to order food that reflects compliance with the U.S. Dietary Guidelines. Included are: raw vegetable appetizer; calorie controlled entree; food cooked without salt; whole wheat breads, rolls or crackers; vegetables seasoned only with herbs and lemon juice; low-fat, low calorie, fruit-based desserts; reduced calorie salad dressing; lean meats; poultry without skin; cereal with skim or low-fat milk; whole grain muffins, pancakes or waffles; low-fat cottage cheese; bagels or breads with low-fat cream cheese; fresh fruit; and broiled/baked fish or seafood.

- Dieters
- Women 35+ years
- Men 45+ years, though to a lesser extent than females
- Residents of the West
- Those with incomes greater than $40,000

HEALTH AND NUTRITION ATTITUDES

Respondents were read a series of attitudinal statements about health and nutrition and asked to what degree they agreed with them. The statements are listed below in order of importance.

Rank	Statement	Percent Strongly Agree
1	You're concerned about how much much alcohol you consume when drinking and driving	73%
2	Good diet and nutrition play a role in prevention of serious illness such as heart disease and cancer	72%
3	Restaurants ought to offer meals specially prepared for children	72%
4	Eating a lot of fruits and vegetables is important to you.	71%
5	Regular exercise is vital to your health	67%
6	You prefer restaurants that feature salad bars.	63%
7	Being in peak physical condition is important to you.	61%
8	You are often concerned about your health.	58%
9	Restaurants ought to offer different portion sizes for different size appetites.	58%
10	Expensive restaurants ought to serve fresh rather than frozen foods.	56%
11	Food prepared at home is generally more nutritions than food prepared at restaurants.	55%
12	It's important to eat three well balanced meals per day.	53%
13	You prefer broiled foods to fried foods.	52%
14	Watching calories is an essential part of controlling your weight.	48%
15	You are drinking less alcohol when you are eating out than you did two years ago.	48%

Rank	Statement	Percent Strongly Agree
16	Your favorite type of restaurant is one where everything is made from scratch.	47%
17	You are concerned about the amount of alcohol you consume for health reasons.	45%
18	When you eat out, you eat foods different from the foods you eat at home.	45%
19	Fried food is bad for you.	39%
20	You wish more restaurants in your area offered food for people on restricted diets.	38%
21	Wish more restaurants in your area offered menu items cooked without salt.	34%
22	The most important thing about food is taste.	32%
23	You are tired of hearing about what is good and bad for you when it comes to food.	31%
24	When eating out for a special occasion, you are less concerned about nutritional value of the food you eat.	30%
25	You eat more than you should.	30%
26	You make a point of ordering foods that are nutritious when eating out.	29%
27	You look for low fat foods when you eat out.	21%
28	It's ok to snack between meals.	18%
29	You would eat out more if it wasn't so fattening	15%
30	Breakfast is the one meal a person can skip without any bad effects.	14%
31	Low calorie means less taste.	14%
32	It's important to eat a lot of red meat.	11%
33	Foods that are good for you don't usually taste good	9%
34	There's no difference in taste between fresh frozen foods in restaurants.	6%

HEALTH AND NUTRITION ATTITUDES SPECIFIC TO RESTAURANTS

Six of the health and nutrition attitude statements were specific to restaurants or eating out behavior. Below is a look at the groups who agreed with these statements more strongly than average.

- You prefer restaurants that feature salad bars.

	Percent Strongly Agree
Total	63%
Women, 18-24 yrs.	78%
25-34 yrs.	72%
35-44 yrs.	71%
Residents of the West	71%
Rural dwellers	71%

- Restaurants ought to offer different portion sizes for different appetites.

Total	58%
Women, 45-54 yrs.	69%
55-64 yrs.	68%
65 yrs. and older	66%
People who consider themselves overweight	66%
Those on diets	64%

- You wish more restaurants in your area offered food for people on special diets.

Total	38%
Men, 55-64 yrs.	62%
Women, 35-44 yrs.	51%
45-54 yrs.	48%
55-64 yrs.	53%
65 yrs. and older	51%
Those on diets	53%
Those with high school education	49%

- You wish more restaurants in your area offered menu items cooked without salt.

Total	34%
Women, 35-44 yrs.	49%
45-54 yrs.	45%
55-64 yrs.	48%
Those on diets	53%

- You make a point of ordering foods that are nutritious when eating out.

	Percent Strongly Agree
Total	29%
Men, 55-64 yrs.	38%
Women, 35-44 yrs.	45%
45-54 yrs.	52%
55-64 yrs.	53%
Those with income of less than $20,000	40%

- You look for low-fat foods when you eat out.

Total	21%
Men, 55-64 yrs.	42%
Women, 45-54 yrs.	39%
55-64 yrs.	41%
65 yrs. and older	32%
Urban dwellers	34%

EATING BEHAVIORS

Survey participants were presented with descriptive statements of eating behavior and asked how well the statements described their own behavior and asked how well the statements described their own behavior. Only one statement, that dealing with attention paid to the nutritional content of food, was either completely or very descriptive of the majority of respondents.

Statement	Very or Completely Descriptive, Percent
You pay attention to the nutritional content of the food you eat.	54%
You often skip at least one meal each day.	50%
You eat what you want whenever you feel like it.	50%
Other members of your family affect what you eat.	47%
You are a "meat and potatoes" person.	43%
You pay attention to the calorie content of the food you eat.	41%
You prefer to eat many small meals or snacks rather than the standard three meals a day.	27%

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